



# **Power off and on all nodes in grid**

## **StorageGRID**

NetApp  
April 10, 2024

# Table of Contents

- Power off and on all nodes in grid ..... 1
  - Stop services and shut down grid nodes ..... 1
  - Start up grid nodes ..... 3

# Power off and on all nodes in grid

You might need to shut down your entire StorageGRID system, for example, if you are moving a data center. These steps provide a high-level overview of the recommended sequence for performing a controlled shutdown and startup.

When you power off all nodes in a site or grid, you will not be able to access ingested objects while the Storage Nodes are offline.

## Stop services and shut down grid nodes

Before you can power off a StorageGRID system, you must stop all services running on each grid node, and then shut down all VMware virtual machines, container engines, and StorageGRID appliances.

### About this task

Stop services on Admin Nodes and API Gateway Nodes first, and then stop services on Storage Nodes.

This approach allows you to use the primary Admin Node to monitor the status of the other grid nodes for as long as possible.



If a single host includes more than one grid node, do not shut down the host until you have stopped all of the nodes on that host. If the host includes the primary Admin Node, shut down that host last.



If required, you can [migrate nodes from one Linux host to another](#) to perform host maintenance without impacting the functionality or availability of your grid.

### Steps

1. Stop all client applications from accessing the grid.
2. Log in to each Gateway Node:
  - a. Enter the following command: `ssh admin@grid_node_IP`
  - b. Enter the password listed in the `Passwords.txt` file.
  - c. Enter the following command to switch to root: `su -`
  - d. Enter the password listed in the `Passwords.txt` file.

When you are logged in as root, the prompt changes from `$` to `#`.

3. Stop all services running on the node: `service servermanager stop`

Services can take up to 15 minutes to shut down, and you might want to log in to the system remotely to monitor the shutdown process.

4. Repeat the previous two steps to stop the services on all Storage Nodes, Archive Nodes, and non-primary Admin Nodes.

You can stop the services on these nodes in any order.



If you issue the `service servermanager stop` command to stop the services on an appliance Storage Node, you must power cycle the appliance to restart the node.

5. For the primary Admin Node, repeat the steps for [logging into the node](#) and [stopping all services on the node](#).
6. For nodes that are running on Linux hosts:
  - a. Log in to the host operating system.
  - b. Stop the node: `storagegrid node stop`
  - c. Shut down the host operating system.
7. For nodes that are running on VMware virtual machines and for appliance Storage Nodes, issue the shutdown command: `shutdown -h now`

Perform this step regardless of the outcome of the `service servermanager stop` command.

For the appliance, this command shuts down the compute controller, but the appliance is still powered on. You must complete the next step.

8. If you have appliance nodes:
  - For the SG100 or SG1000 services appliance
    - i. Turn off the power to the appliance.
    - ii. Wait for the blue power LED to turn off.
  - For the SG6000 appliance
    - i. Wait for the green Cache Active LED on the back of the storage controllers to turn off.

This LED is on when cached data needs to be written to the drives. You must wait for this LED to turn off before you turn off power.

- ii. Turn off the power to the appliance, and wait for the blue power LED to turn off.

- For the SG5700 appliance
  - i. Wait for the green Cache Active LED on the back of the storage controller to turn off.

This LED is on when cached data needs to be written to the drives. You must wait for this LED to turn off before you turn off power.

- ii. Turn off the power to the appliance, and wait for all LED and seven-segment display activity to stop.

9. If required, log out of the command shell: `exit`

The StorageGRID grid has now been shut down.

## Related information

[SG100 and SG1000 services appliances](#)

[SG6000 storage appliances](#)

[SG5700 storage appliances](#)

# Start up grid nodes

Follow this sequence to start up the grid nodes after a complete shutdown.



## What you'll need

If the entire grid has been shut down for more than 15 days, you must contact technical support before starting up any grid nodes. Do not attempt the recovery procedures that rebuild Cassandra data. Doing so might result in data loss.

## About this task

If possible, you should power on the grid nodes in this order:

- Apply power to Admin Nodes first.
- Apply power to Gateway Nodes last.



If a host includes multiple grid nodes, the nodes will come back online automatically when you power on the host.

## Steps

1. Power on the hosts for the primary Admin Node and any non-primary Admin Nodes.



You will not be able to log in to the Admin Nodes until the Storage Nodes have been restarted.

2. Power on the hosts for all Archive Nodes and Storage Nodes.

You can power on these nodes in any order.

3. Power on the hosts for all Gateway Nodes.
4. Sign in to the Grid Manager.
5. Select **NODES** and monitor the status of the grid nodes. Verify that there are no alert icons next to the node names.

# Nodes

View the list and status of sites and grid nodes.

Total node count: 14

Name	Type	Object data used	Object metadata used	CPU usage
StorageGRID Deployment	Grid	0%	0%	—
^ Data Center 1	Site	0%	0%	—
DC1-ADM1	Primary Admin Node	—	—	5%
DC1-ARC1	Archive Node	—	—	2%
DC1-G1	Gateway Node	—	—	2%
DC1-S1	Storage Node	0%	0%	12%
DC1-S2	Storage Node	0%	0%	11%
DC1-S3	Storage Node	0%	0%	11%

## Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.